

WHAT IS CLAIMED IS:

Sub G 1. A colored data storage media, comprising:
a substrate comprising colorant and plastic, wherein the substrate has a transmissivity of about 85% or less at a readback laser wavelength when traversing a 1.2 mm thick colored substrate (disk).

2. The storage media of Claim 1, wherein the substrate comprises up to about 5 wt% of the colorant, based upon the entire weight of the substrate.

3. The storage media of Claim 2, wherein the substrate comprises up to about 1 wt% of the colorant.

4. The storage media of Claim 3, wherein the substrate comprises less than about 0.5 wt% of the colorant.

5. The storage media of Claim 1, wherein the transmissivity is about 70% to about 85%.

Sub G 6. The storage media of Claim 5, wherein the transmissivity is about 75% to about 80%.

Sub G 7. The storage media of Claim 5, wherein the transmissivity is about 75% to about 85%.

8. The storage media of Claim 1, wherein the substrate further comprises visual effects selected from the group consisting of glass, metal, titanium dioxide, mica, angular metamerism materials, and combinations comprising at least one of the foregoing visual effects.

9. The storage media of Claim 8, where in the visual effects have a geometry selected from the group consisting of chips, particles, and combinations comprising at least one of the foregoing geometries.

10. The storage media of Claim 8, where in the visual effects are in the form of flakes.

11. The storage media of Claim 1, wherein the colorant further comprises a fluorescent material having a fluorescent color emission wavelength which is not equal to the readback laser wavelength.

12. The storage media of Claim 11, wherein the fluorescent color emission wavelength is different than the readback laser wavelength by at least about $\pm 10\text{nm}$.

13. The storage media of Claim 12, wherein the fluorescent color emission wavelength is different than the readback laser wavelength by at least about $\pm 20\text{nm}$.

14. The storage media of Claim 1, wherein the plastic is selected from the group consisting of thermoplastics and thermosets.

15. The storage media of Claim 14, wherein the thermoplastic is selected from the group consisting of polyvinyl chloride, polyolefins, polyesters, polyamides, polysulfones, polyimides, polyether imides, polyether sulfones, polyphenylene sulfides, polyether ketones, polyether ether ketones, ABS resins, polystyrenes, polybutadiene, polyacrylates, polyacrylonitrile, polyacetals, polycarbonates, polyphenylene ethers, ethylene-vinyl acetate copolymers, polyvinyl acetate, liquid crystal polymers, ethylene-tetrafluoroethylene copolymer, aromatic polyesters, polyvinyl fluoride, polyvinylidene fluoride, polyvinylidene chloride, Teflons, and blends, copolymers, mixtures, reaction products and composites comprising at least one of the foregoing thermoplastics.

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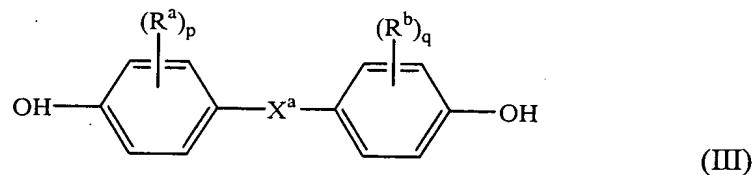
a 16. The storage media of Claim 15, wherein the thermoplastic is selected from the group consisting of polyethylene, chlorinated polyethylene, polypropylene, polyethylene terephthalate, polybutylene terephthalate, polycyclohexylmethylene terephthalate, hydrogenated polysulfones, hydrogenated polystyrenes, syndiotactic and atactic polystyrenes, polycyclohexyl ethylene, styrene-co-acrylonitrile, styrene-co-maleic anhydride, polymethylmethacrylate, methyl methacrylate-polyimide copolymers, and blends, copolymers, mixtures, reaction products and composites comprising at least one of the foregoing thermoplastics.

SC 2 17. The storage media of Claim 15, wherein the polycarbonate comprises structural units of the formula (I):

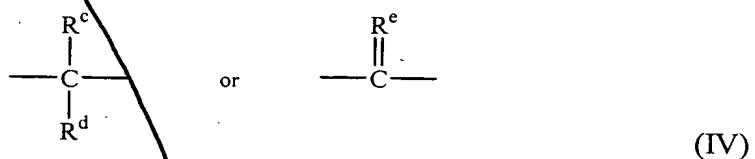


in which at least about 60 percent of the total number of R^1 groups are aromatic organic radicals and the balance are aliphatic, alicyclic, or aromatic radicals.

18. The storage media of Claim 15, wherein the polycarbonate is produced by the interfacial reaction of dihydroxy compounds having general formula (III) as follows:



wherein R^a and R^b each, independently, represent a halogen atom or a monovalent hydrocarbon group; p and q are each independently integers from 0 to 4; and X^a represents one of the groups of formula (IV):



wherein R^c and R^d each independently represent a hydrogen atom or a monovalent linear or cyclic hydrocarbon group and R^e is a divalent hydrocarbon group.

19. The storage media of Claim 14, wherein the thermoset is selected from the group consisting of epoxy, phenolic, alkyds, polyester, polyimide, polyurethane, mineral filled silicone, bis-maleimides, cyanate esters, vinyl, and benzocyclobutene resins, and blends, copolymers, mixtures, reaction products and composites comprising at least one of the foregoing thermosets.

20. A colored data storage media, comprising:

a substrate comprising a fluorescent colorant and plastic, wherein the substrate has a fluorescent color emission wavelength which is not equal to the readback laser wavelength.

21. The storage media of Claim 20, wherein the fluorescent color emission wavelength is different than the readback laser wavelength by at least about $\pm 10\text{nm}$.

25 21. The storage media of Claim 21, wherein the fluorescent color emission wavelength is different than the readback laser wavelength by at least about ± 15 nm.

26 22. The storage media of Claim 22, wherein the fluorescent color emission wavelength is different than the readback laser wavelength by at least about ± 20 nm.

27 23. The storage media of Claim 23, wherein the plastic is selected from the group consisting of thermoplastics and thermosets.

28 24. The storage media of Claim 24, wherein the thermoplastic is selected from the group consisting of polyvinyl chloride, polyolefins, polyesters, polyamides, polysulfones, polyimides, polyether imides, polyether sulfones, polyphenylene sulfides, polyether ketones, polyether ether ketones, ABS resins, polystyrenes, polybutadiene, polyacrylates, polyacrylonitrile, polyacetals, polycarbonates, polyphenylene ethers, ethylene-vinyl acetate copolymers, polyvinyl acetate, liquid crystal polymers, ethylene-tetrafluoroethylene copolymer, aromatic polyesters, polyvinyl fluoride, polyvinylidene fluoride, polyvinylidene chloride, Teflons, and blends, copolymers, mixtures, reaction products and composites comprising at least one of the foregoing thermoplastics.

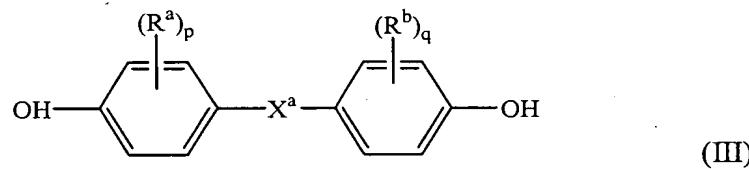
29 25. The storage media of Claim 25, wherein the thermoplastic is selected from the group consisting of polyethylene, chlorinated polyethylene, polypropylene, polyethylene terephthalate, polybutylene terephthalate, polycyclohexylmethylene terephthalate, hydrogenated polysulfones, hydrogenated polystyrenes, syndiotactic and atactic polystyrenes, polycyclohexyl ethylene, styrene-co-acrylonitrile, styrene-co-maleic anhydride, polymethylmethacrylate, methyl methacrylate-polyimide copolymers, and blends, copolymers, mixtures, reaction products and composites comprising at least one of the foregoing thermoplastics.

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27. The storage media of Claim *25*, wherein the polycarbonate comprises structural units of the formula (I):

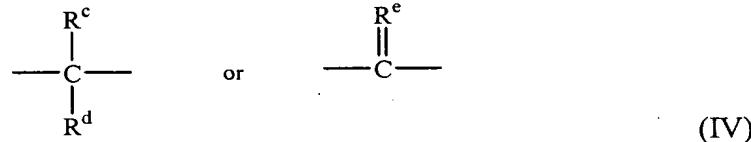


in which at least about 60 percent of the total number of R^1 groups are aromatic organic radicals and the balance are aliphatic, alicyclic, or aromatic radicals.

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28. The storage media of Claim *27*, wherein the polycarbonate is produced by the interfacial reaction of dihydroxy compounds having general formula (III) as follows:



wherein R^a and R^b each, independently, represent a halogen atom or a monovalent hydrocarbon group; p and q are each independently integers from 0 to 4; and X^a represents one of the groups of formula (IV):



wherein R^c and R^d each independently represent a hydrogen atom or a monovalent linear or cyclic hydrocarbon group and R^e is a divalent hydrocarbon group.

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29. The storage media of Claim *24*, wherein the thermoset is selected from the group consisting of epoxy, phenolic, alkyds, polyester, polyimide, polyurethane, mineral filled silicone, bis-maleimides, cyanate esters, vinyl, and benzocyclobutene resins, and blends, copolymers, mixtures, reaction products and composites comprising at least one of the foregoing thermosets.

33. 30. The storage media of Claim 20, ~~further comprising a layer disposed adjacent to the substrate, wherein the layer is selected from the group consisting of protective layer(s), dielectric layer(s), data storage layer(s), and reflective layer(s), and combinations comprising at least one of the foregoing layers.~~

34. 31. The storage media of Claim 20, wherein the substrate has a transmissivity exceeding about 68% at a readback laser wavelength, when traversing a 1.2 mm thick colored substrate (disk).

32. The storage media of Claim 31, wherein the substrate has a transmissivity of about 70% to about 90%. 21

35. The storage media of Claim 32, wherein the substrate has a transmissivity of about 70% to about 85%.

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